CLAIMS:

1. A method of encoding or decoding video data, the method being performed by at least one processor and comprising:

indicating, with a syntax element, types of slices for all slices of a coded picture, the syntax element being coded using an unsigned integer, and

encoding or decoding the video data based on the types of slices indicated via the syntax element,

wherein picture header related syntax elements are included in a slice layer raw byte sequence payload network abstraction layer unit, and a flag is used to indicate the presence of the picture header related syntax elements in the slice layer raw byte sequence payload network abstraction layer unit.

2. The method of claim 1, wherein for the coded picture, only related syntax elements are coded.

3. The method of claim 2, wherein when all slices of the coded picture are indicated as including intra-prediction, no inter-prediction syntax elements are coded.

4. The method of any one of claims 1 to 3, wherein the types of the slices may be inferred from a decoded access unit delimiter value.

5. The method of any one of claims 1 to 3, wherein the types of the slices may be inferred when signaled in high level syntax.

6. The method of any one of claims 1 to 3, wherein the types of the slices may be inferred based on a number of rectangular slices in the coded picture.

7. The method of any one of claims 1 to 6, wherein the syntax element is a 0-th order Exp-Golomb-coded syntax element.

8. The method of any one of claims 1 to 6, wherein the syntax element is a 2 bit syntax element configurable with three statuses.

9. The method of any one of claims 1 to 6, wherein the syntax element is a 2 bit syntax element configurable with four statuses.

10. An apparatus for coding or encoding video data, the apparatus comprising:

at least one memory configured to store computer program code; and

at least one processor configured to access the at least one memory and operate according to the computer program code, the computer program code comprising:

indicating code configured to cause the at least one processor to indicate, via a syntax element, types of slices for all slices of a coded picture, the syntax element being coded using an unsigned integer, and

encoding or decoding code configured to encode or decode the video data based on the types of slices indicated via the syntax element,

wherein the indicating code is configured to indicate the types of slices such that picture header related syntax elements are included in a slice layer raw byte sequence payload network abstraction layer unit, and a flag is used to indicate the presence of the picture header related syntax elements in the slice layer raw byte sequence payload network abstraction layer unit.

11. The apparatus of claim 10, wherein the indicating code is configured to indicate the types of slices such that, for the coded picture, only related syntax elements are coded.

12. The apparatus of claim 11, wherein the indicating code is configured to indicate the types of slices such that when all slices of the coded picture are indicated as including intra-prediction, no inter-prediction syntax elements are coded.

13. The apparatus of any one of claims 10 to 12, wherein the indicating code is configured to indicate the types of slices such that the types of the slices may be inferred from a decoded access unit delimiter value.

14. The apparatus of any one of claims 10 to 12, wherein the indicating code is configured to indicate the types of slices such that the types of the slices may be inferred when signaled in high level syntax.

15. The apparatus of any one of claims 10 to 12, wherein the indicating code is configured to indicate the types of slices such that the types of the slices may be inferred based on a number of rectangular slices in the coded picture.

16. The apparatus of any one of claims 10 to 15, wherein the indicating code is configured such that the syntax element is a 0-th order Exp-Golomb-coded syntax element.

17. The apparatus of any one of claims 10 to 15, wherein the indicating code is configured such that the syntax element is a 2 bit syntax element configurable with three statuses.

18. A computer-readable storage medium storing instructions that cause at least one processor to execute the method of any one of claims 1 to 9.